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REMARKS

Reconsideration and allowance of the above-referenced application are respectfully requested.

Initially, the indication that claim 6 represents allowable subject matter is appreciatively noted. This claim has been rewritten into independent form herein, and should therefore be allowable for these reasons.

The remaining claims stand rejected under 35 USC 103 as allegedly being unpatentable over Damani. This contention is respectfully traversed. Damani does teach a system in which messages are sent between processes in an unstructured manner. According to Damani, any process can send in a message to any other process at any other time. These messages are logged.

In contrast to the way that messages are sent in Damani, the present system defines creating at least one inbox for storing messages that are received from another process object, and at least one outbox that stores messages to be transmitted to another process object (see claim 1, and specifically its limitations a and b). Limitation e of claim 1 defines interconnecting each of the created outboxes of the process object, to create an inbox of another process object. This

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allows a message placed in an outbox to be delivered to exactly the set of inboxes to which an outbox has been connected by the process method.

This effectively constructs an explicit set of communication channels among the processes. Moreover, this differs dramatically from the technique of Damani, where all the processes are effectively connected to all of the other processes.

Nowhere does Damani teach the combination of limitations described above, and specifically the program methods of creating an inbox and outbox and interconnecting the two. Therefore, claim 1 should be allowable over Damani for these reasons alone.

In addition, claim 1 defines a "freeze method" that saves the state of the process to persistent storage, thereby changing the process object to a "frozen process object that does not use operating system resources". The rejection alleges that this is equivalent to the "checkpoint" disclosed in Damani at column 2, lines 10-45, column 1, lines 24-35 and column 18 lines 25-40. However, there are significant differences between the claimed "freeze method" and the checkpoint in Damani. Damani teaches a number of operations which are carried out in order to allow fault tolerance in the system.

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The checkpoint in Damani writes the state of the process to disk in order to maintain that fault tolerance. After this process is written to disk, the process continues running as normal. However, that checkpoint can be used in the event of an error in order to restart the faulty process from the latest checkpoint stored in the memory; see, for example, column 5, lines 5-7.

Nothing in Damani teaches anything about writing the state of the process to disk and stopping the process execution, in order to prevent the process from using operating system resources. The goal of the checkpoint in Damani is fault tolerance. All of the teachings in Damani bases the fault tolerance on the ability to recover a process if it subsequently crashes.

The freeze method as defined by claim 1 changes the process to a frozen process object that does not use operating system resources. This enables more processes to run on a single machine, since many of the processes do not use resource. Damani teaches nothing about this latter advantage, and therefore teaches nothing which would teach or suggest the "freeze method" of claim 1.

Similarly, the "thaw method" is not taught or suggested by Damani. Damani uses a log to recover information about a

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process after it has crashed. In contrast, the claim 4 method restores a frozen process from persistent storage by restoring an already processed object. This is a very different kind of system.

The differences discussed above show significant differences between the present claims and Damani. The rejection states that it would have been obvious to apply the teaching of Damani in order to "reduce the amount of lost work to failures...", directly quoting from Damani at column 1, lines 34-38. However, the freezing and phoneline has nothing to do with recovery from faults, but rather to produce "a frozen process object which does not use operating system resources" and then to thought that that two "a ready process object". Therefore, the two different systems are inherently different, and for these reasons, claim 1 should be allowable along with the claims which depend therefrom.

Claim 2 defines that the mail daemon object controls order of messages in the inbox. The rejection states that Damani teaches this. However, the mail daemon object defined by claim 2 which controls order in the mailbox is very different than the receiver log file of Damani. The receiver log file is merely a listing of received messages, their senders, and the order in which they were received. This log file passively records

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message delivery, and does not control the order of messages as defined by claim 2.

Claim 3 should be allowable since it states a summoning response method, for instance a process object, when the process object is summoned by another process object. Damani does teach a logging process notification, but this is a message broadcast by a process to provide other processes with information about the stability of its state. In contrast, the summoning process of claim 3 causes a new process to be created when its presence is required in the system, i.e. if it is summoned by another process object. This claimed subject matter is hence entirely different from Damani.

Claim 4 should be even further allowable since it defines that the summoning causes the thaw method to be invoked if the process object is frozen when summoned. The rejection alleges that Damani teaches this system, but there is certainly no teaching or suggestion of the freeze method, or this kind of summoning. Certainly there is no teaching or suggestion that a frozen process should be thawed when summoned in this way.

Therefore, claim 4 should be additionally allowable for these reasons.

Claim 5 should also be allowable. Claim 5 defines a snapshot variable that indicates whether the process object has

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recorded its state. Damani has a process list which is centralized, that is one list keeps track of the state of multiple processes. Therefore, it should be apparent that the process object in Damani would not record its own state, as defined by claim 5.

It is believed that all of the pending claims have been addressed in this paper. However, failure to address a specific rejection, issue or comment, does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above are not intended to be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In paragraph therefore, and in view of the above amendments and remarks, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully solicited.

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Respectfully submitted,

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Scott C. Harris
Reg. No. 32,030

Fish & Richardson P.C.
PTO Customer Number: 20985
12390 El Camino Real
San Diego, CA 92130
Telephone: (858) 678-5070
Facsimile: (858) 678-5099
10397979.doc

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